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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,836	03/30/2004	Kodalapura Nagabhushana Rao Nagaraju	884.B46US1	3122

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EXAMINER	
KENDALL, CHUCK O	

ART UNIT	PAPER NUMBER
2192	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/812,836	RAO NAGARAJU ET AL.	
	Examiner	Art Unit	
	Chuck O. Kendall	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) ~~1-28~~ 1-3, 5-17, 19-20, 22-23, 25-28 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 11/09/06
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

1. This action is in response to the application filed 07/23/07.

2. Claims 1 – 3, 5 – 17, 19, 20, 22, 23 and 25 – 28 have been amended and have been reconsidered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 – 3, 5 – 17, 19, 20, 22, 23 and 25 – 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bogle et al. US 6,353,923 B1 in view of Khan et al. USPN 6,219,782 B1.

Regarding claims 1 and 20, Bogle discloses a method, comprising:

dynamically establishing a first debugging session with a first processing core of a processor (FIG. 4, 422);

dynamically establishing a second debugging session with a second processing core of the same processor (FIG, 4, 423); and

concurrently managing the first and second debugging sessions independently from one another on the same processor (FIG.4, 411).

Bogle doesn't' expressly disclose wherein the first processor being a multi-core processor which supports the first and second processing core and wherein the debugging sessions operates independent of the other debugging session and both sessions independently and simultaneously proceed within the same processor on their respective processor cores, and the first debugging session is associated with a first application and first user that is different from the second debugging session that is associated with the second application and second user.

However, Khan in analogous art and similar configuration discloses: "...The multiple user software debugging system comprises integrating at least one of a plurality of debug interface calls into the target software itself. The target software is a server based computer program... wherein at least one of the plurality of debug interfaces is loaded as an operational component of the target software. A final step includes executing the target software under minimally intrusive control of the debug engine by way of the debug interfaces in a concurrent manner for each of the multiple user." (2:5 – 15). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine, Bogle and Khan, because it would enable debugging multiple users concurrently as suggested by Khan above.

Regarding claims 2 and 22, the method of claim 1, further comprising:

initiating a first instance of a debugger on the first processing core of the processor for interactions occurring during the first debugging session (FIG.6, 612); and

initiating a second instance of the debugger on the second processing core of the processor for interactions occurring during the second debugging session (FIG.6, 612).

Regarding claims 3, and 23, the method of claim 1, wherein dynamically establishing the first and second debugging sessions further comprises dynamically establishing the sessions by connecting the first and second processing cores of the processor to separate instances of a debugger via a Peripheral Component Interconnect (PCI) interface (5: 40 – 55).

Regarding claim 5, the method of claim 1, further comprising:

identifying within a first configuration file of a first debugger the first processing core associated with the first debugging session (FIG. 4, see Host process a); and

identifying within a second configuration file of a second debugger the second processing core associated with the second debugging session (FIG. 2, see Host Process c).

Regarding claim 6, the method of claim 5, further comprising:

routing, by the processor, the first debugger to the first processing core for establishing the first debugging session based on the first configuration file (FIG. 2, see process a, b and c and see control flow which goes in both directions and all associated text); and

routing, by the processor, the second debugger to the second processing core for establishing the second debugging session based on the second configuration (FIG. 2, see process a, b and c and see control flow which goes in both directions and all associated text).

Regarding claim 7, the method of claim 1, further comprising maintaining, by the processor, processor states while dynamically establishing the first and second debugging session (14:5 – 10).

Regarding claims 8, 15 and 25 Bogle anticipates a method/system, comprising:

receiving, by a processor, a first debugging session request (FIG. 4, 422);

receiving, by the processor, a second debugging session request (FIG. 4, 423);

dynamically attaching a first debugger to a first processing core for servicing the first debugging session request (FIG.6, 612 and all associated text); and

dynamically attaching a second debugger to a second processing core for servicing the second debugging request (FIG.6, 612 and all associated text).

Bogle doesn't' expressly disclose wherein the first processor being a multi-core processor which supports the first and second processing core and wherein the

debugging sessions operates independent of the other debugging session and both sessions independently and simultaneously proceed within the same processor on their respective processor cores, and the first debugging session is associated with a first application and first user that is different from the second debugging session that is associated with the second application and second user and initiated for a first application by a first device of first user and initiated for a second application by a first device or a second user.

However, Khan in analogous art and similar configuration discloses: "...The multiple user software debugging system comprises integrating at least one of a plurality of debug interface calls into the target software itself. The target software is a server based computer program... wherein at least one of the plurality of debug interfaces is loaded as an operational component of the target software. A final step includes executing the target software under minimally intrusive control of the debug engine by way of the debug interfaces in a concurrent manner for each of the multiple user." (2:5 – 15). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine, Bogle and Khan, because it would enable debugging multiple users concurrently as suggested by Khan above.

Regarding claims 9 and 26, the method of claim 8, wherein dynamically attaching the first and second debuggers further includes identifying the first and second debuggers as a same debugger being initiated as independent and duplicative instances on different processing cores (FIG.6, 612, see all associated text).

Regarding claims 10 and 27, the method of claim 8, further comprising identifying within the first and the second debugging session requests configuration information which identifies the first and second processing cores (FIG. 4, 220 and 230).

Regarding claims 11, 19, the method of claim 8, wherein dynamically attaching the first and second debuggers further includes maintaining a previous state associated with the processor of the first and second processing cores before and after attaching the first and second debuggers to their respective processing cores (FIG. 2, see process a, b and c and see control flow which goes in both directions and all associated text).

Regarding claim 12, the method of claim 8, wherein receiving the first and second debugging session requests further includes remotely initiating the requests from the processor that has the first and second processing cores (FIG.4, see host process b and all associated text).

Regarding claim 13, the method of claim 8, further comprising maintaining existing states associated with existing applications, the existing applications processing on the first and second processing cores before and after dynamically attaching the first and second debuggers to the first and second processing cores, respectively (FIG. 4, 220 and 203).

Regarding claim 14, the method of claim 8, wherein dynamically attaching the first and second debuggers further includes attaching the first and second debuggers to their respective processing cores as their respective processing cores are processing a Number of other applications (FIG. 4, 220 and 203 and all associated text).

Regarding claim 16, the system of claim 15, further comprising a Peripheral Component Interconnect (PCI) interfaced to the processor for receiving requests to dynamically attach the first and second debugger instances to their respective processing cores (5: 40 – 55).

Regarding claim 17 and 28, the system of claim 15, further comprising a first configuration file associated with the first debugging instance and a second configuration file associated with the second debugging instance, wherein each configuration file identifies its respective processing core, and wherein the processor in response to the configuration files dynamically attaches the debugger instances to their respective processing cores (FIG. 4, 220, 230).

Response to Arguments

Applicant's arguments with respect to claims 1 – 3, 5 – 17, 19, 20, 22, 23 and 25 – 28 have been considered but are moot in view of the new ground(s) of rejection.

Correspondence information

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuck Kendall whose telephone number is 571-2723698. The examiner can normally be reached on 10:00 am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on 571-2723695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ck.

TED VO
PRIMARY EXAMINER